=> file hcaplus FILE 'HCAPLUS' ENTERED AT 17:46:48 ON 23 MAR 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 23 Mar 2007 VOL 146 ISS 14 FILE LAST UPDATED: 22 Mar 2007 (20070322/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que nos 132

L24	784	SEA	FILE=HCAPLUS	ABB=ON	PLU≃ON	LARSEN, B?/AU
L25	1700	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	PETERSEN, J?/AU
L26	465	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MEIER, E?/AU
L27	7	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	KJOLBYE, A?/AU
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L29	1501	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	NIELSEN, M?/AU
L30	76	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HOLSTEIN-RATHLOU, N?/AU
L31	735	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MARTINS, J?/AU
L32	2	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L24 AND L25 AND L26 AND
		1.27	AND 1.28 AND I	129 AND	T.30 AND	1.31

Inventors Search

=> d ibib ed abs 132 1-2

L32 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2002:754415 HCAPLUS Full-text

DOCUMENT NUMBER:

137:263304

TITLE:

Synthesis of peptides and medical uses of intracellular communication facilitating

compounds

INVENTOR (S):

Larsen, Bjarne Due; Petersen, Jorgen Soberg; Meier, Eddie; Kjolbye, Anne Louise; Jorgensen, Niklas Rye; Nielsen, Morten Schak ; Holstein-Rathlou, Niels-Henrik;

Martins, James B.

PATENT ASSIGNEE(S):

Zealand Pharmaceuticals A/S, Den.

SOURCE:

PCT Int. Appl., 233 pp.

CODEN: PIXXD2
Patent

DOCUMENT TYPE:

English

LANGUAGE:

. 2

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PAIENT INFORMATION

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

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WO 2002077017
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                LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
                NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
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PRIORITY APPLN. INFO.:
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US 2001-314470P P 200108 23

DK 2000-288 A 200002 23

DK 2000-738 A 200005 04

US 2000-251659P P 200012 06

WO 2002-US5773 W 200202 22

OTHER SOURCE(S): MARPAT 137:263304

ED Entered STN: 04 Oct 2002

The invention relates to novel peptides, including novel antiarrhythmic peptides of linear or cyclic structure, having improved stability in vitro and/or in vivo, to compns. comprising these peptides, and to uses of the peptides for the preparation of medicaments. The invention also relates to the use of compds. that facilitate the intercellular communication for the preparation of medicaments for the treatment of a range of diseases characterized in impaired intercellular gap junctional communication. The invention further relates to a method of treating diseases, such as bladder incontinence, disorders of alveolar tissue and bronchial tissue, impaired hearing due to diseases of the cochlea, endothelial lesions, diabetic retinopathy and diabetic neuropathy, ischemia of the central nervous system and spinal cord, dental tissue disorders including periodontal disease, kidney diseases leading to hypertension, and a method of preventing failures of bone marrow transplantation. Ac-D-Tyr-D-Pro-D-4Hyp-Gly-D-Ala-Gly-NH2 (Hyp = hydroxyprolyl) was prepared by the solid-phase method and assayed for biol. activity. Graphs include those for relative cell-to-cell conductance, PI-turnover in neonatal rat cardiomyocytes, and ventricular APD90 dispersion.

L32 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2001:636085 HCAPLUS Full-text

DOCUMENT NUMBER:

135:180957

TITLE:

Preparation of novel antiarrhythmic peptides

INVENTOR (S):

Larsen, Bjarne Due; Petersen, Jorgen Soberg; Meier, Eddi; Kjolbye, Anne Louise; Jorgensen, Niklas Rye; Nielsen, Morten Schak ; Holstein-Rathlou, Niels-Henrik;

Martins, James B.

PATENT ASSIGNEE(S):

Zealand Pharmaceuticals A/S, Den.

SOURCE:

PCT Int. Appl., 189 pp. CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001062775	A2	20010830 .	WO 2001-DK127	200102
WO 2001062775 W: AE, AL, AM,	A3 AT, AU	20020131 J, AZ, BA, BB	B, BG, BR, BY, CA, C	22 CH, CN, CR,
CU, CZ, DE,	DK, DM	1, EE, ES, FI	C, GB, GD, GE, GH, G	M, HR, HU,

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JP	2003	5288	26		Т		2003	0930	•	JP :	2001-	5625	56			00102
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PT	12261	160			т		2005	0429	:	PT :	2001-	9073	93		2	00102 2
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US	20051	L1329	93		A1		2005	0526	1	US :	2003-	64629	94		1	-
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PRIORITY APPLN. INFO.:			DK 2000-288	А	200002 23
			DK 2000-738	A	200005 04
			US 2000-2516	559P P	200012 06
			US 2001-7922	.86 A	200102 22
			WO 2001-DK12	?7 W	200102 22
			US 2001-3144	70P P	200108 23
			WO 2002-US57	773 W	200202 22

OTHER SOURCE(S): MARPAT 135:180957

ED Entered STN: 31 Aug 2001

AB Peptides X-A-B-Y and cyclo(X-A-B-Y) [A and B represents chemical moieties having an amino group (radical) and a carboxy group; X represents a peptide sequence of 1 to 3 D-or L-amino acid residues or an N-terminal modification of the group A-B when Y represents a C-terminal peptide sequence of 2 to 5 D- or L-amino acid residues; X represents a peptide sequence of 2 to 5 D- or L-amino acid residues when Y represents a C-terminal peptide sequence of 1 to 3 D- or L-amino acid residues; for the linear peptide, X is optionally chemical modified at its N-terminal and has an optional linking group comprising 0-8 backbone atoms] and their mirror image or a retro analogs or pharmaceutically acceptable derivs. were prepared for treating cardiac arrhythmias. Thus, Ac-D-Tyr-D-pro-D-4Hyp-Gly-D-Ala- Gly-NH2 (4Hyp = 4-hydroxyprolyl) was prepared by the solid-phase method using TentaGel-S-Ram and examined for biol. activity [assays included effect on gap junction intercellular communication (GJIC) in cardiomyocytes, binding to tissue prepns. of murine heart, and effect on cAMP formation in CHO cells].

=> file reg

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STRUCTURE FILE UPDATES: 22 MAR 2007 HIGHEST RN 927959-98-6 DICTIONARY FILE UPDATES: 22 MAR 2007 HIGHEST RN 927959-98-6

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TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

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http://www.cas.org/ONLINE/UG/regprops.html

VAR G1=17/21/CH3 VAR G2=OH/NH2 VAR G3=13/44 VAR G4=11/46 NODE ATTRIBUTES: CONNECT IS E2 RC AT 11 CONNECT IS E2 RC AT CONNECT IS E2 RC AT 44 CONNECT IS E2 RC AT 46 DEFAULT MLEVEL IS ATOM MLEVEL IS CLASS AT 11 13 44 46 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 44

STEREO ATTRIBUTES: NONE

L22 15 SEA FILE=REGISTRY SSS FUL L20

100.0% PROCESSED 859694 ITERATIONS

SEARCH TIME: 00.00.43

15 ANSWERS

=> file hcaplus
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FILE COVERS 1907 - 23 Mar 2007 VOL 146 ISS 14 FILE LAST UPDATED: 22 Mar 2007 (20070322/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que nos 123

L20 STR

L22 15 SEA FILE=REGISTRY SSS FUL L20

L23 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L22

Structure Search

L23 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2007:61250 HCAPLUS Full-text

DOCUMENT NUMBER:

146:143006

TITLE:

Preparation of N- or C-terminally modified small

peptides for pharmaceutical use

INVENTOR (S):

Larsen, Bjarne Due; Kerns, Edward H.

PATENT ASSIGNEE(S):

Zealand Pharma A/S, Den.; Kiddle, Simon John

SOURCE:

PCT Int. Appl., 54pp. CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

1

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PAT	ENT 1	NO.			KIN) -	DATE	<u>. :</u> .	1	APPL:	ICAT:	ION I	۷O.		Dž	ATE
WO .	2007	- 00706	50		A2		2007	0118	ī	WO 20	006-0	3B253	27		2	00607
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OTHER SOURCE(S): MARPAT 146:143006

ED Entered STN: 19 Jan 2007

07

The invention discloses N- or C-terminally modified small peptides having AB antiarrhythmic and improved pharmacokinetic properties and a reduced tendency to inhibit the activity of isoenzyme 3A4 of cytochrome P 450 oxidase. Thus, N-(hydroxyacetyl)-Gly-Tyr-NH2 was prepared by the solid-phase method and shown to exhibit antiarrhythmic activity (48.7% response in the calcium-induced arrhythmia assay). 919104-63-5P TΤ

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(preparation of N- or C-terminally modified small peptides having antiarrhythmic activity)

919104-63-5 HCAPLUS RN

L-Tyrosinamide, N2-(2-hydroxyacetyl)-L-glutaminyl- (CA INDEX NAME) CN

Absolute stereochemistry.

L23 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2005:1130891 HCAPLUS Full-text

DOCUMENT NUMBER: 143:399818

CD23-binding peptides and peptidomimetics for TITLE:

treatment of autoimmune and inflammatory

INVENTOR(S): Mossalayi, Mohammad Djavad; Moynet, Daniel;

Vincendeau, Philippe; Rambert, Jerome; Self,

Christopher R.

Universite Bordeaux 2, Fr. PATENT ASSIGNEE(S):

PCT Int. Appl., 59 pp. SOURCE:

CODEN: PIXXD2 Patent

DOCUMENT TYPE: LANGUAGE: English

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

> PATENT NO. KIND DATE APPLICATION NO. DATE WO 2005098435 A2 20051020 WO 2005-IB1133

200504 05

20060330 WO 2005098435 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,

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MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,

US, UZ, VC, VN, YU, ZA, ZM, ZW

A3

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,

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GN, GQ, GW, ML, MR, NE, SN, TD, TG 20051020 AU 2005229779 A1 AU 2005-229779

200504

05 20051020 CA 2005-2560726 CA 2560726 A1 200504 05 EP 2005-718527 20061220 A2 EP 1733231 200504 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR EP 2004-290899 PRIORITY APPLN. INFO.: 200404 05 WO 2005-IB1133 200504 05

OTHER SOURCE(S):

MARPAT 143:399818

ED Entered STN: 21 Oct 2005

The invention describes compds. comprising new and useful peptides and peptidomimetics that can bind to CD23. They are capable of reducing inflammatory responses associated with auto-immune diseases, chronic inflammatory diseases, allergies and other inflammatory conditions such as those mediated by the mammalian immune system. Compds. of the invention relate to a CD23-binding peptide wherein said peptide comprises an amino-acid sequence of X1-X2- X3-X4-X5-X6-X7-X8, wherein: X1 is Phe, or is absent; X2 is His or Ala; X3 is Glu, Ser, Ala, Asn, Lys, or Cys; X4 is Asn, Phe, Gln, Pro, Ser, or Ala; X5 is Trp; X6 is Pro, Arg, Glu, Gly, Cys, or Lys; X7 is Ser, Pro, Leu, Thr Ala, Gly, Asn, or absent; and X8 is Phe, Gly, or is absent. Treatment of arthritic rats with peptide p30A resulted in remission of the arthritic condition and produced weight

IT 867069-28-1P 867069-48-5P

RL: BPN (Biosynthetic preparation); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(CD23-binding peptides and peptidomimetics for treatment of autoimmune and inflammatory disorders) $\dot{}$

RN 867069-28-1 HCAPLUS

CN L-Tryptophan, N2-acetyl-L-asparaginyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 867069-48-5 HCAPLUS

CN D-Tryptophan, N2-acetyl-D-asparaginyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L23 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2004:1025958 HCAPLUS Full-text

DOCUMENT NUMBER:

CORPORATE SOURCE:

142:477847

TITLE:

Aspartame and aspartame derivatives effect human

thrombin catalytic activity

AUTHOR (S):

Scheffler, Julie E.; Berliner, Lawrence J. Department of Chemistry and Biochemistry,

University of Denver, Denver, CO, 80208-2436,

SOURCE:

Biophysical Chemistry (2004), 112(2-3), 285-291

CODEN: BICIAZ: ISSN: 0301-4622

PUBLISHER:

Elsevier B.V.

DOCUMENT TYPE:

Journal

LANGUAGE:

English

OTHER SOURCE(S):

CASREACT 142:477847

Entered STN: 30 Nov 2004

The study of small Asp-Phe analogs was undertaken since this dipeptide sequence is AB critical in fibrinogen recognition and catalysis. The inhibition of clotting activity by Asp-Phe-Me ester (aspartame), formyl-Asp-Phe-Me ester and acetyl-Asp-Phe was biphasic in all cases, indicating the presence of at least two binding sites. The Nterminally blocked derivs. are stronger inhibitors than aspartame. In contrast, tosyl-Gly-Pro-Arg-p'-nitroanilide hydrolysis was inhibited minimally by Asp-Phe-Me, ester [Ki(app)=98 mM]. Acetyl-Asp-Phe inhibition of thrombin amidase activity was biphasic, tenfold stronger and appeared to be strongly cooperative. These results are discussed with respect to the inhibition of α -thrombin by ATP.

TT 108274-49-3P

RL: SPN (Synthetic preparation); PREP (Preparation)

(aspartame and aspartame derivs. effect human thrombin catalytic activity)

108274-49-3 HCAPLUS RN

L-Phenylalanine, N-(N-acetyl-L-α-aspartyl)- (9CI) (CA INDEX CN NAME)

Absolute stereochemistry.

REFERENCE COUNT:

THERE ARE 41 CITED REFERENCES AVAILABLE 41 FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L23 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2003:982484 HCAPLUS Full-text

DOCUMENT NUMBER:

140:164220

TITLE:

Tryptophan as a probe for acid-base equilibria

in peptides

AUTHOR (S):

Marquezin, Cassia Alessandra; Hirata, Izaura Yoshico; Juliano, Luiz; Ito, Amando Siuiti

CORPORATE SOURCE:

Instituto de Fisica da Universidade de Sao

Paulo, Brazil

SOURCE:

Biopolymers (2003), 71(5), 569-576 CODEN: BIPMAA; ISSN: 0006-3525

PUBLISHER:

John Wiley & Sons, Inc.

DOCUMENT TYPE:

Journal English

LANGUAGE: Entered STN: 17 Dec 2003 ED

We present results of time resolved fluorescence measurements performed in Tryptophan AB (Trp) derivs. and Trp-containing peptides in the pH range 3.0-11.0. For each compound, a set of decay profiles measured in a given range of pH values was examined as a whole using the global anal. technique. The data were fitted to two or three lifetime components and the anal. allowed the monitoring of the changes in the concentration of the different species contributing to the total fluorescence in that pH interval. decay components were sensitive to the ionization state of groups neighboring the

indole ring and pK values for the equilibrium between protonated and deprotonated species were obtained from the preexponential factor of the lifetime components. In Trp, protonation of the amino terminal of the rotamer having electron transfer rate comparable to fluorescence decay rates was responsible for the interconversion of a long lifetime component to the 2.9 ns component usually observed in neutral pH. Trp-X peptides also have a single rotamer dominating the decay that is quenched by NH3+. X-Trp peptides seem to be conformationally less restricted and it is possible that rotamer interconversion occur at high pH, increasing the population of nonquenched rotamers. Interconvertion between rotameric conformations of Trp are also present in the titration of ionizable groups in the side chain of peptides like His-Trp and Glu-Trp and control of pH is essential to the correct interpretation of fluorescence data in the study of peptides having such groups near to the Trp residue.

656240-68-5 TT

RL: PRP (Properties)

(tryptophan as probe for acid-base equilibrium in peptides)

656240-68-5 HCAPLUS RN

L-Tryptophanamide, N-acetyl-L-α-glutamyl- (9CI) (CA INDEX CN

Absolute stereochemistry.

REFERENCE COUNT:

THERE ARE 19 CITED REFERENCES AVAILABLE 19 FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN 2002:283177 HCAPLUS Full-text ACCESSION NUMBER:

DOCUMENT NUMBER:

137:63466

TITLE:

Quantitative structure-activity relationship:

IX. Estimation of logP for some peptides

AUTHOR(S): Golovanov, I. B.; Tsygankova, I. G.

CORPORATE SOURCE:

Institute of Theoretical and Experimental

Biophysics, Russian Academy of Sciences,

Pushchino, Russia

Russian Journal of General Chemistry SOURCE:

(Translation of Zhurnal Obshchei Khimii) (2002),

72(1), 137-143

CODEN: RJGCEK; ISSN: 1070-3632

DOCUMENT TYPE:

PUBLISHER:

MAIK Nauka/Interperiodica Publishing

Journal English

LANGUAGE: Entered STN: 16 Apr 2002 ED

Based on the previously described quant. structure-activity relationship, estns. were AB made for the distribution factor (logP) in the octanol-water system of amides of Nacetyl peptides and peptides containing up to five amino acid residues. Data for diand tripeptides reasonably agree with the available exptl. data.

132765-93-6 132765-99-2 IT

RL: PRP (Properties)

(quant. mol. structure-property relationship and calcn. of distribution factor for peptides in octanol-water system)

132765-93-6 HCAPLUS RN

L-Phenylalaninamide, N2-acetyl-L-glutaminyl- (9CI) (CA INDEX NAME)

132765-99-2 HCAPLUS RN

L-Phenylalaninamide, N2-acetyl-L-asparaginyl- (9CI) (CA INDEX NAME) CN

Absolute stereochemistry.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE

FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L23 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN 1998:737268 HCAPLUS Full-text ACCESSION NUMBER:

DOCUMENT NUMBER:

130:95825

TITLE:

Structure-based design and synthesis of small

molecule protein-tyrosine phosphatase 1B

inhibitors

AUTHOR (S): Yao, Zhu-Jun; Ye, Bin; Wu, Xiong-Wu; Wang,

Shaomeng; Wu, Li; Zhang, Zhong-Yin; Burke,

Terrence R., Jr.

CORPORATE SOURCE: Laboratory of Medicinal Chemistry, Division of

> Basic Sciences, National Cancer Institute, National Institutes of Health, Bethesda, MD,

20892, USA

SOURCE: Bioorganic & Medicinal Chemistry (1998), 6(10),

1799-1810

CODEN: BMECEP; ISSN: 0968-0896

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE:

Journal LANGUAGE: English

Entered STN: 20 Nov 1998 ED

GI

Protein-tyrosine phosphatase (PTP) inhibitors are attractive as potential signal AB transduction-directed therapeutics which may be useful in the treatment of a variety of diseases. New naphthyldifluoromethyl phosphonic acids I and II were designed bearing acidic functionality intended to interact with the protein-tyrosine phosphatase 1B (PTP1B) Arg47, which is situated just outside the catalytic pocket. This residue has been shown previously to provide key interactions with acidic residues of phosphotyrosyl-containing peptide substrates. Consistent with trends predicted by mol. dynamics calcns., the new analogs bound with 7- to 14-fold higher affinity than the parent III, in principal validating the design rationale. 219316-38-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation of glutamate-substituted naphthyldifluoromethylphsophonic acids as protein-tyrosine phosphatase 1B inhibitors)

219316-38-8 HCAPLUS RN

L-Phenylalaninamide, N-acetyl-L-α-glutamyl-4-CN (difluorophosphonomethyl) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT:

THERE ARE 30 CITED REFERENCES AVAILABLE 30 FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN 1998:89038 HCAPLUS Full-text ACCESSION NUMBER:

DOCUMENT NUMBER:

128:254233

Correlation between binding and dynamics at SH2 TITLE:

domain interfaces

AUTHOR (S): Kay, Lewis E.; Muhandiram, D. R.; Wolf, Gert;

Shoelson, Steven E.; Forman-Kay, Julie D.

Protein Engineering Network Centres Excellence, CORPORATE SOURCE:

Departments Medical Genetics, Biochemistry, Chemistry, University Toronto, Toronto, ON, M5S

1A8, Can.

Nature Structural Biology (1998), 5(2), 156-163 SOURCE:

CODEN: NSBIEW; ISSN: 1072-8368

Nature America PUBLISHER:

DOCUMENT TYPE: Journal

LANGUAGE: English Entered STN: 16 Feb 1998

Protein recognition is a key determinant in regulating biol. processes. Structures of AB complexes of interacting proteins provide significant insights into the mechanism of specific recognition. However, studies performed by modifying residues within a protein interface demonstrate that binding is not fully explained by these static pictures. Thus, structural data alone was not predictive of affinities in binding studies of phospholipase Cy1 and Syp phosphatase SH2 domains with phosphopeptides. NMR relaxation expts. probing dynamics of Me groups of these complexes indicate a correlation between binding energy and restriction of motion at the interfacial region responsible for specific binding.

IT 205174-01-2

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process). (correlation between binding and dynamics at SH2 domain

interfaces)

205174-01-2 HCAPLUS RN

L-Tyrosinamide, N-acetyl-L-α-aspartyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT:

THERE ARE 48 CITED REFERENCES AVAILABLE 48

FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L23 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN 1998:34211 HCAPLUS Full-text ACCESSION NUMBER:

DOCUMENT NUMBER: 128:190087

Octanol-water partition of nonzwitterionic TITLE:

peptides: predictive power of a molecular

size-based model

Buchwald, Peter; Bodor, Nicholas AUTHOR (S):

CORPORATE SOURCE: Center for Drug Discovery, University of

Florida, Health Science Center, Gainesville, FL,

32610-0497, USA

SOURCE: Proteins: Structure, Function, and Genetics

(1998), 30(1), 86-99

CODEN: PSFGEY; ISSN: 0887-3585

PUBLISHER: Wiley-Liss, Inc.

DOCUMENT TYPE: Journal LANGUAGE:

English Entered STN: 21 Jan 1998

A remarkably simple, mol. size-based model developed to predict octanol-water partition coeffs. for organic compds. is tested on a set of 188 neutral peptides with available exptl. partition data. Despite using only two parameters, it gives a promising correlation (r2 = 0.914; σ = 0.455, F = 1978.0), and predictions are in a realistic range even for larger peptides (cyclosporin, melanotan, sandostatin) where common, overparametrized fragment methods become quite unreliable. Ion-pair partitioning and the extraction constant formalism is briefly reviewed to describe the sigmoidal lipophilicity profile of ionizable, nonzwitterionic peptides. It seems possible to extend the present model to estimate apparent partition coeffs. measured around neutral pH and physiol. conditions for monoionic peptides; however, as no standard conditions are yet defined and only relatively small number of exptl. data are available, the situation here is more complex.

132765-93-6 132765-99-2 IT

RL: PRP (Properties)

(octanol-water partition of nonzwitterionic peptides and

predictive power of mol. size-based model)

RN 132765-93-6 HCAPLUS

CN L-Phenylalaninamide, N2-acetyl-L-glutaminyl- (9CI) (CA INDEX NAME)

132765-99-2 HCAPLUS RN

L-Phenylalaninamide, N2-acetyl-L-asparaginyl- (9CI) (CA INDEX NAME) CN

Absolute stereochemistry.

REFERENCE COUNT:

THERE ARE 62 CITED REFERENCES AVAILABLE 62 FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L23 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1995:977158 HCAPLUS Full-text

DOCUMENT NUMBER:

124:97406

TITLE:

Hydrophobic contribution constants of amino acid

residues to the hydrophobicities of

oligopeptides

AUTHOR (S):

Gao, Hua; Wang, Fengzhen; Lien, Eric, J.

CORPORATE SOURCE:

Department Pharmaceutical Sciences, University Southern California, Los Angeles, CA, 90033, USA Pharmaceutical Research (1995), 12(9), 1279-83

SOURCE:

CODEN: PHREEB; ISSN: 0724-8741

PUBLISHER: DOCUMENT TYPE: Plenum Journal English

LANGUAGE:

Entered STN: 12 Dec 1995

AΒ The main purpose of this study is to explore the additive-constitutive nature of common amino acids in their contribution to the partition coeffs. of small peptides. The Log P values and other physico-chemical parameters of the peptides studied are taken from the literature. The frequency of appearance (ni) of each individual amino acid is calculated as the number of the amino acids in a given peptide. The partition coeffs. (Log P(oct./buff.) at pH 7) of 87 N-acetyl-peptide-amides have been correlated with the frequency of appearance of amino acids. From the correlation obtained, the de novo hydrophobic contribution consts. of 19 amino acid residues are derived for the first time. The contribution consts. are extended to 59 unmodified regular peptides with the inclusion of the pka values of both N-terminal and C-terminal amino acids. The models thus obtained have been validated with addnl. 27 peptides (both N-acetyl-peptide-amides and unmodified). The Log P of oligopeptides is very well correlated with the de novo hydrophobic contribution consts. of amino acids. The models we have derived are reasonably accurate in predicting the hydrophobicities of new oligopeptides (≤tetrapeptides) at a fixed pH (e.g., 7).

132765-93-6 132765-99-2

RL: PRP (Properties)

(hydrophobic contribution consts. of amino acid residues to hydrophobicities of oligopeptides)

RN 132765-93-6 HCAPLUS

L-Phenylalaninamide, N2-acetyl-L-glutaminyl- (9CI) (CA INDEX NAME) CN

RN 132765-99-2 HCAPLUS

CN L-Phenylalaninamide, N2-acetyl-L-asparaginyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L23 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:11164 HCAPLUS Full-text

DOCUMENT NUMBER: 122:214479

TITLE: Quantitative Analyses of the

Structure-Hydrophobicity Relationship for

N-Acetyl Di- and Tripeptide Amides

AUTHOR(S): Akamatsu, Miki; Katayama, Takashi; Kishimoto,

Daisuke; Kurokawa, Youichi; Shibata, Hiroyuki;

Ueno, Tamio; Fujita, Toshio

CORPORATE SOURCE: Department of Agricultural Chemistry, Kyoto

University, Kyoto, 606-01, Japan

SOURCE: Journal of Pharmaceutical Sciences (1994),

83(7), 1026-33

CODEN: JPMSAE; ISSN: 0022-3549

DOCUMENT TYPE: - LANGUAGE:

Journal English

ED Entered STN: 08 Nov 1994

The partition coefficient (P) of neutral species and the apparent partition ratio (P') AB at pH 7 of the ionized form were measured with the 1-octanol/water system for a number of N-acetyl di- and tripeptide amides having un-ionizable and ionizable side chains. Their log values were studied in terms of free-energy-related substituent and substructural parameters using regression anal. to give correlation equations of high quality physicochem. as well as statistically. The intrinsic hydrophobicity of sidechain substituents and their steric effect on the relative solvation of the backbone CONH groups were significant in determining the log P values of the un-ionizable acetyl peptide amides. For the log P value of peptides with polar side-chain substituents, resp. indicator variable terms were required to account for the sum of specific effects of substituents such as intramol. hydrogen-bond formation and the "polar proximity factor" for augmentation of the hydrophobicity. For the log P'(pH 7) value of basic and acidic peptides, the ability of counterionic species to form ion-pairs, the change in the apparent hydrophobicity of ionizable groups from the intrinsic value for their nonionized forms, the effect of ion-pairing itself, and other effects were addnl. considered. From the regression coeffs. of the parameter terms in correlation equations an effective hydrophobicity index was defined for each side chain, and the application and its limitation were suggested.

IT 132765-93-6 132765-99-2

RL: PRP (Properties)

(quant. anal. of the structure-hydrophobicity relationship for

N-acetyl di- and tripeptide amides)

RN 132765-93-6 HCAPLUS

CN L-Phenylalaninamide, N2-acetyl-L-glutaminyl- (9CI) (CA INDEX NAME)

132765-99-2 HCAPLUS RN

CN L-Phenylalaninamide, N2-acetyl-L-asparaginyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L23 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER:

1991:415621 HCAPLUS Full-text

DOCUMENT NUMBER:

115:15621

TITLE:

Infusion solutions containing N-acylated

dipeptides and reducing sugars

INVENTOR(S):

Kosegi, Koji; Tsukamoto, Yoshitsugu; Yaginuma,

Hideya; Sato, Makoto; Amino, Mitsuto

PATENT ASSIGNEE(S):

Morishita Pharmaceutical Co., Ltd., Japan;

Ajinomoto Co., Inc.

SOURCE:

Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
 JP 02286624	A	19901126	JP 1989-106946	
UP 02266624	А	17701120	0F 1909 100940	198904 25
PRIORITY APPLN. INFO.:			JP 1989-106946	198904
				25

Entered STN: 12 Jul 1991 ED

Infusion solns. contain reducing sugars and N-acylated dipeptides (C terminal = L-AB tryptophan residue). The dipeptides do not cause Mailard reaction or discoloration with the sugars, are stable in the solns., and show high bioavailability. Ratio of tryptophan formation in homogenized liver or kidney from N-acetyl-Ala-Trp (I) was much higher than from N-acetyl-Trp. An infusion solution was prepared from I, amino acids, glucose, AcOK, KH2PO4, MgSO4.7H2O, NaCl, and Ca gluconate.H2O.

134321-04-3 134321-05-4 IT

RL: BIOL (Biological study)

(infusion solns. containing glucose and)

134321-04-3 HCAPLUS RN

L-Tryptophan, N-(N-acetyl-L-α-glutamyl)- (9CI) (CA INDEX CN NAME)

RN 134321-05-4 HCAPLUS

CN L-Tryptophan, N-(N-acetyl-L- α -aspartyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L23 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1991:143996 HCAPLUS Full-text

DOCUMENT NUMBER:

114:143996

TITLE:

Hydrophobicity of N-acetyl-di- and tripeptide amides having unionizable side chains and correlation with substituent and structural

parameters

AUTHOR (S):

Akamatsu, Miki; Okutani, Shinichi; Nakao,

Kazuya; Hong, Nam Joo; Fujita, Toshio

CORPORATE SOURCE:

Dep. Agric. Chem., Kyoto Univ., Kyoto, 606,

Japan

SOURCE:

Quantitative Structure-Activity Relationships

(1990), 9(3), 189-94

CODEN: QSARDI; ISSN: 0931-8771

DOCUMENT TYPE:

Journal English

LANGUAGE:

ED Entered STN: 19 Apr 1991

The log P value of 53 N-acetyldi- and -tripeptide amides composed of amino acids having unionizable side chains was measured in a 1-octanol/pH 7.0 aqueous buffer system. The factors governing the variations in the log P value among these protected peptides were quant. analyzed to formulate a correlation equation with free energy-related physicochem. and substructural parameters. The log P value was governed by the sum of the hydrophobicity of side chains and the backbone as well as by the steric effects of side chain substituents on the relative solvation of the backbone CONH groups. The log P value decreases by 0.6 log unit for the peptide bond, other factors being equal. For amino acids with polar side chains, the log P value was also affected by the polar proximity factor and intramol. hydrogen bond formation in a way similar to that of zwitterioonized peptides reported previously.

IT 132765-93-6 132765-99-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(partition coefficient and physicochem. parameters of)

RN 132765-93-6 HCAPLUS

CN L-Phenylalaninamide, N2-acetyl-L-glutaminyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 132765-99-2 HCAPLUS

CN L-Phenylalaninamide, N2-acetyl-L-asparaginyl- (9CI) (CA INDEX NAME)

L23 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1990:493824 HCAPLUS Full-text

DOCUMENT NUMBER: 113:93824

TITLE: Inhibition of chymotrypsin by peptidyl

trifluoromethyl ketones: determinants of

slow-binding kinetics

AUTHOR(S): Brady, Kenneth; Abeles, Robert H.

CORPORATE SOURCE: Dep. Toxicol., Harvard Sch. Public Health,

Boston, MA, 02115, USA

SOURCE: Biochemistry (1990), 29(33), 7608-17

CODEN: BICHAW; ISSN: 0006-2960

DOCUMENT TYPE: Journal LANGUAGE: English

Entered STN: 16 Sep 1990 ED A series of 7 peptidyl trifluoromethyl ketone (TFK) inhibitors of chymotrypsin were AB prepared which differ at the P1 and P2 subsites. Inhibition equilibrium and kinetics of association and dissociation with chymotrypsin were measured. The association rate of Ac-Phe-CF3 was measured at enzyme concns. between 8 nM and 117 μM in order to examine the relation between the ketone/hydrate equilibrium of trifluoromethyl ketones and the slow binding by these inhibitors. The association rate decreased at high enzyme concns., indicating that TFK ketone is the reactive species and that conversion of TFK hydrate to TFK ketone becomes rate limiting under these conditions. Inhibitors with hydrophobic side-chains at P2 bound more tightly but more slowly to chymotrypsin, indicating that formation of van der Waals contacts between the P2 side-chain and the histidine-57 and isoleucine-99 side-chains of chymotrypsin is a relatively slow process. Inhibitor properties were compared to the Michaelis-Menten kinetic consts. of a homologous series of peptide Me ester and peptide amide substrates. Plots of log Ki vs. log(kcat/Km) were linear with slopes of 0.65, indicating that these inhibitors are able to utilize 65% of the total binding energy between chymotrypsin and its hydrolytic transition state.

IT 128550-52-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

RN 128550-52-7 HCAPLUS

CN L-Phenylalaninamide, N-acetyl-L- α -aspartyl- (9CI) (CA INDEX

NAME)

Absolute stereochemistry.

L23 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 1988:473918 HCAPLUS Full-text

DOCUMENT NUMBER: 109:73918

TITLE: Preparation of N-protected L-α-aspartyl-L-

phenylalanines

INVENTOR(S): Takemoto, Tadashi; Hisamitsu, Kunio; Yugawa,

Toshihide

PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan

SOURCE:

Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62263197	A	19871116	JP 1986-104321	198605 07
JP 06096595	В	19941130		0,
JP 07145193	, A	19950606	JP 1994-112379	199405 26
JP 2513159 PRIORITY APPLN. INFO.:	B2	19960703	JP 1986-104321	
				198605 07

ED Entered STN: 02 Sep 1988

N-Protected L- α -aspartyl-L-phenylalanines, useful as intermediates for aspartame, were prepared by treating N-protected L-aspartic acid anhydride with L-phenyalanine in aqueous solvents at pH \geq 7 in the presence of (in)organic acid salts of alkali metals or alkaline earth metals. Thus, N-formyl-L-aspartic acid anhydride was added to aqueous solution of L-phenylalanine Na salt monohydrate (I) in the presence of NaCl at -20° and pH 12.0-12.5 to give 73.5% N-formyl-L- α -aspartyl-L-phenylalanine (based on I). IT 108274-49-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, as intermediate for aspartame)

RN 108274-49-3 HCAPLUS

CN L-Phenylalanine, N-(N-acetyl-L- α -aspartyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L23 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1988:166121 HCAPLUS Full-text

DOCUMENT NUMBER:

108:166121

TITLE:

SOURCE:

Protease-catalyzed preparation of N-protected

peptides

 ${\tt INVENTOR}\,({\tt S}):$

Honda, Yutaka; Tsuchiya, Toyohito; Takemoto,

Tadashi; Yugawa, Toshihide

PATENT ASSIGNEE(S):

Ajinomoto Co., Inc., Japan Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent Japanese

LANGUAGE:

FAMILY ACC. NUM. COUNT: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
 JP 62259597	A	19871111	JP 1986-104319	

198605

07

JP 06034745

B 19940511

PRIORITY APPLN. INFO.:

JP 1986-104319

198605 07

ED Entered STN: 13 May 1988

N-Protected peptides or their derivs. were prepared by treating N-protected amino acids AB or their derivs. with amino acids or their derivs. in H2O of a two-phase medium composed of H2O containing protease and H2O-immiscible organic solvents containing quaternary ammonium or phosphonium salts and then transferring the resulting Nprotected peptides containing ≥1 carboxyl group into the organic layer by forming ammonium or phosphonium salts, or by treating N-protected amino acids or their derivs. with amino acids or their derivs. in the presence of protease in H2O followed by extraction of the resulting N-protected peptides (containing ≥1 carboxyl group) with H2O-immiscible organic solvents containing quaternary ammonium salts or phosphonium salts. The method prevented products from hydrolysis with protease. Thus, protease M was dissolved in an aqueous solution of N-acetyl-L-aspartic acid and L-phenylalanine (I), and the solution was mixed with toluene containing trioctylmethylammonium chloride, and shaken at 40° for 24 h to give 4.2% (based on I; 1.2% from H2O layer and 3.0% from organic layer) Ac-Asp-Phe, vs. 1.6% for a reaction without addition of an organic solvent.

IT 108274-49-3P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, by protease-catalyzed condensation of N-protected amino acids with amino acids)

RN 108274-49-3 HCAPLUS

CN L-Phenylalanine, N-(N-acetyl-L- α -aspartyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L23 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1987:214403 HCAPLUS Full-text

DOCUMENT NUMBER:

106:214403

TITLE:

N-protected L-α-aspartyl-L-phenylalanine

INVENTOR(S):

Takemoto, Tadashi; Yugawa, Toshihide; Hisamitsu,

Kunio

PATENT ASSIGNEE(S):

Ajinomoto Co., Inc., Japan

SOURCE:

Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT:

PATENT NO.	KIND-	DATE	APPLICATION NO.	DATE
JP 62004299	A	19870110	JP 1985-144137	198507 01
JP 06080074	В	19941012	•	
CA 1274950	A1	19901002	CA 1986-512467	
				198606 26

US	4740616	Α	19880426	US	1986-883354		
							198607 01
US	4789758	A	19881206	US	1987-106801		198710
JP	07070177	A	19950314	JP	1994-70542		13
							199404 08
JP PRIORIT	2513155 Y APPLN. INFO.:	B2	19960703	JР	1985-144137	A	
							198507 01
				US	1986-872020	A2	198606
							09
				US	1986-883354	A3	198607 01

OTHER SOURCE(S): CASREACT 106:214403

ED Entered STN: 26 Jun 1987

Title compds., useful as intermediates for aspartame, were prepared by treating N-protected L-aspartic anhydride with alkali metal salts, alkaline earth metal salts, or organic amine salts of L-phenylalanine in aqueous media. Thus, N-formyl-L-aspartic anhydride was added to an aqueous solution of L-PhCH2CH(NH2)CO2Na.H2O at pH 12.0-12.5 and 5° in 1 h to give 68.2% N-formyl-L- β -aspartyl-L-phenylalanine.

IT 108274-49-3P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, as intermediate for aspartame)

RN 108274-49-3 HCAPLUS

CN L-Phenylalanine, N-(N-acetyl-L- α -aspartyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L23 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: DOCUMENT NUMBER:

1986:168847 HCAPLUS <u>Full-text</u> 104:168847

TITLE:

Dipeptide derivatives

PATENT ASSIGNEE(S):

Flork, Michel, Fr.

SOURCE:

Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60042396	A	19850306	JP 1983-150112	198308
PRIORITY APPLN. INFO.:			JP 1983-150112	17
				198308

17

Entered STN: 17 May 1986 ED

The title compds., useful as central nervous system agents (no data), were prepared AB Thus, 240 g (N-acetylasparaginimido)glutamic acid was added to a mixture of 198 q (3,4dihydroxyphenyl)alanine and 1 mL H2O at 0° and pH 8.5 (digested with the addition of 5 N NaOH) and the resulting mixture eluted over Duolite and the eluant acidified with HCl and then heated at 45° for 1 h to give N-acetyl- α -aspartyl- α -glutamyl-(3,4dihydroxyphenyl) alanine.

101679-23-6P IT

> RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation of, as central nervous system agent)

RN 101679-23-6 HCAPLUS

Tyrosine, N-(N-acetyl-L- α -glutamyl)-3-hydroxy- α -methyl-CN (9CI) (CA INDEX NAME)

L23 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN

1985:422916 HCAPLUS Full-text ACCESSION NUMBER:

DOCUMENT NUMBER: 103:22916

TITLE: Specific cleavage of peptides containing an

aspartic acid (β -hydroxamic acid) residue

AUTHOR (S): Blodgett, James K.; Loudon, G. Marc; Collins,

Sch. Pharm. Pharm. Sci., Purdue Univ., West CORPORATE SOURCE:

Lafayette, IN, 47907, USA

Journal of the American Chemical Society (1985), SOURCE:

107(14), 4305-13

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE:

English

Journal LANGUAGE: Entered STN: 27 Jul 1985

Peptides containing the aspartyl β -hydroxamic acid residues are cleaved specifically at AB the carboxyl side of this residue at pH ≥6. The cleavage occurs by attack of both the hydroxamic acid nitrogen and the hydroxamic acid oxygen to yield tetrahedral intermediates that, in the rate-limiting step, break down with cleavage of the peptide chain. In a competing reaction, the peptide nitrogen on the carboxyl side attacks the hydroxamate carbonyl to expel hydroxylamine and give an imide intermediate. The cleavage yield reflects the relative efficiency of these two pathways. The extent of cleavage is dramatically increased in the presence of 1 M hydroxylamine. The extent of cleavage is also increased significantly by phosphate buffers, but not by PIPES or imidazole buffers, in the absence of added hydroxylamine. The role of hydroxylamine in some cases may be to intercept the imide or the isoimide; but in at least two cases evidence is presented that hydroxylamine, like phosphate, may be acting as a general acid-base catalyst that selectively catalyzes the breakdown of tetrahedral intermediates leading to chain cleavage. Peptides containing glutamyl (γ-hydroxamic acid) residues are also cleaved, but at rates that are 20-40 times slower than those of

the analogous aspartyl peptides.

96363-02-9

RL: RCT (Reactant); RACT (Reactant or reagent) (specific cleavage of)

RN 96363-02-9 HCAPLUS CN L-Phenylalanine, N-(N2-acetyl-L-asparaginyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L23 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1979:138176 HCAPLUS Full-text

DOCUMENT NUMBER: 90:138176

TITLE: Reduction of oligopeptides to amino alcohols

with borane

AUTHOR(S): Frank, Hartmut; Desiderio, Dominic M.

CORPORATE SOURCE: Inst. Lipid Res., Baylor Coll. Med., Houston,

TX, USA

SOURCE: Analytical Biochemistry (1978), 90(1), 413-19

CODEN: ANBCA2; ISSN: 0003-2697

DOCUMENT TYPE: Journal LANGUAGE: English

ED Entered STN: 12 May 1984

Oligopeptides were reduced with 1M borane in THF at 90° for 30 min to give amino alcs., which were analyzed by thin-layer and gas chromatog. and mass spectrometry. This borane reduction did not give the side products which are formed by LiAlH4 reduction Borane reduction can be used in the separation and identification of constituents of oligopeptide mixts. by gas chromatog.-mass spectrometry during peptide sequencing.

IT 69624-05-1

RL: RCT (Reactant); RACT (Reactant or reagent)
 (reduction of, by borane, amino alcs. from)

RN 69624-05-1 HCAPLUS

CN L-Tyrosine, N-(N-acetyl-L- α -glutamyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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L1

L2

(FILE 'HOME' ENTERED AT 09:42:39 ON 23 MAR 2007)

FILE 'HCAPLUS' ENTERED AT 09:43:13 ON 23 MAR 2007

E US20050113293/PN

. 2 SEA ABB=ON PLU=ON US2005113293/PN

SEL RN

FILE 'REGISTRY' ENTERED AT 09:43:47 ON 23 MAR 2007

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FILE 'REGISTRY' ENTERED AT 12:19:59 ON 23 MAR 2007

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L20 STRUCTURE

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L22 15 SEA SSS FUL L20

SAV L22 TEL294/A
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FILE 'HCAPLUS' ENTERED AT 15:18:16 ON 23 MAR 2007
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